PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Tidhar Dari Shalon Patrick O. Brown Serial No.: 09/356,322 Filing Date: November 24, 1998 For: SUBSTRATES COMPRISING POLYNUCLEOTIDE MICROARRAYS	Confirmation No.: 7679 Examiner: Betty J. Forman Group Art Unit: 1634 Attorney Docket No.: 12665.0009.CNUS01

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In response to the Notice of Allowance and Examiner's Amendment dated April 7, 2008, Applicants submit the following remarks. The issue fee payment is filed concurrently with this paper.

REMARKS

Under the Reasons for Allowance, the Examiner states "[t]he microarray differs from the prior art in that the instantly claimed hydrophobic surface is not locally modified or derivatized prior to polynucleotide deposition for droplet containment" (emphasis added) (*see* item 3 of the Notice of Allowance). Applicants wish to submit the following comments.

It is noted that page 26 of the parent application Serial No. 08/261,388, which the instant application claims priority of and which is incorporated by reference in the instant application, describes:

> The above example was repeated with the DNA suspended in a solution of unpolymerized acrylamide which was spotted on a silane-derivatized glass slide, and the resulting droplets of DNA/acrylamide were polymerized on the surface of the slide in TEMED vapors. Polymerization by heat or UV light gave similar results. (Emphasis added) (*See* lines 1-7).

The above description suggests that the hydrophobic surface can be derivatized with at least silane prior to polynucleotide deposition and that the end product can be an array of spots on a derivatized hydrophobic surface, contrary to the Examiner's above statements. In fact, it is important to functionalize the glass slide with silane or similar agents to provide the glass slide with a functional group to which the DNA can bind.

Applicants also comment that the instantly claimed array is made by a process wherein the interaction of the hydrophobic surface and aqueous reagents limits spreading of the reagents and thereby controls spot size and that the instantly claimed array differs from the prior art in that the aqueous polynucleotides are spotted directly onto the hydrophobic surface, as stated by the Examiner in the Reasons for Allowance.

Applicants further comment that the key difference between the instant invention and the invention of the closest prior art (e.g., Brennan, U.S. Pat. No. 5,474,796) is that the former does

not modify the hydrophobic support to create hydrophobic/hydrophilic boundaries to confine the aqueous reagents as the latter does. Such difference is also acknowledged by the Examiner in the Reasons for Allowance.

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It is believed that no fees are due with this submission. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to this document, the Commissioner is hereby authorized to deduct such fees from Howrey LLP Deposit Account No. 08-3038/12665.0009.CNUS01.

Respectfully submitted,

/j. wendy davis/

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Agent for Assignee
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Date: April 11, 2008